Great Inventions of the 19th Century / Innovative technologies

The 19th century and the beginning of the 20th century was the age of innovative technologies. The advancement in science and the application of this advancement in various fields marked this period. The big improvement in steel production was dictated by the need for steel in the construction of bridges and railways and in producing military equipment and weapons including revolvers, artillery and military vehicles. In 1814 the first practical steam-powered railway locomotive was built. A few years later in 1825 the first public steam-powered railway in the world was in use. The year 1838 saw the first transatlantic steamship services, while 1900 marked the first successful airship and three years later the first motor-driven aeroplane. Engines progressed from stove-heated to steam powered and then to internal combustion. Dictated largely by the needs of the more industrialised countries, which were seeking a better connection with the sources of raw materials, manufacturing centres and markets, the leaders in these innovative technologies were the northern countries of Western and Central Europe while the introduction of these innovations in the Ottoman, Arab and some other European lands was taking place more gradually.



Working Number:	TN 023
Name:	Railway station
Holding Museum:	-
Date:	19th century
Materials:	-
Curator Justification:	This train station was built after the beginning of the French protectorate in Tunisia (1881). It is an example of how colonial infrastructures went together with the necessity of controlling strategic areas for economic and political reasons. Grombalia was an important area where many French colonial farms had been installed.



Working Number:	SA 001
Name:	A railway track with the opening date (1908) engraved
Holding Museum:	Saudi Commission for Tourism and Antiquities
Date:	1908
Materials:	-
Curator Justification:	The Hijaz Railway is one of the most famous examples of the use of the products of the steel industry. It was built by the Sultan ‘Abd al-Hamid with the support of Germany and by raising money through donations, revenues of the Ottoman state raised from the sale of stamps and a special tax.



Working Number:	DE 001
Name:	Steam engine building
Holding Museum:	-
Date:	1841–1843
Materials:	-
Curator Justification:	A good example of a design associating the innovation of the steam engine with the interest in “exotic” architecture promoted in Sanssouci Palace in Potsdam, Germany, built during the Romantic period.



Working Number:	JO 075
Name:	Revolver
Holding Museum:	Jordan Folklore Museum, Department of Antiquities
Date:	Late 19th century – early 20 century
Materials:	Cast steel
Curator Justification:	The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number:	JO 081
Name:	Revolver
Holding Museum:	Jordan Folklore Museum, Department of Antiquities
Date:	Late 19th century – early 20th century
Materials:	Cast steel
Curator Justification:	The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number:	SP 087
Name:	Long Moorish musket
Holding Museum:	Cerralbo Museum
Date:	19th century
Materials:	Wood, metal, fabric; handmade, damascene work
Curator Justification:	A 19th-century Moroccan gun brought to Spain during the North African wars between Spain and Morocco in 1909. The gun was made using local techniques and damascene work.



Working Number:	JO 073
Name:	Revolver
Holding Museum:	Jordan Folklore Museum, Department of Antiquities
Date:	Late 19th century – early 20 century
Materials:	Cast steel
Curator Justification:	The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number:	JO 076
Name:	Revolver
Holding Museum:	Jordan Folklore Museum, Department of Antiquities
Date:	Late 19th century – early 20 century
Materials:	Cast steel
Curator Justification:	The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number: JO 074

Name: Revolver

Holding Museum: Jordan Folklore Museum, Department of Antiquities

Date: Late 19th century – early 20 century

Materials: Cast steel

Curator Justification: The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number: JO 080

Name: Revolver

Holding Museum: Jordan Folklore Museum, Department of Antiquities

Date: Late 19th century – early 20th century

Materials: Cast steel

Curator Justification: The steel industry also changed warfare as new armaments became widespread. This revolver was used during the Arab Revolt and in World War I.



Working Number: IT1 086

Name: 'The War on Trial'

Holding Museum: Gramsci Institute Foundation

Date: 1913

Materials: -

Curator Justification: Giuseppe Scalarini worked for the socialist newspaper Avanti! His anticolonial cartoons spoke out against the political interests of the war in Libya and the consequences of war on the population.



Working Number: FR 036

Name: In the year 2000: The tennis lawn; the eaglet hunters; on the road to London (Pas-de-Calais)

Holding Museum: National Library of France

Date: 19th century

Materials: -

Curator Justification: The French popular imagination was captured by the dream of flying. As usual during periods of great transformation, people saw the world as moving in continuous, optimistic progress. It was very common to imagine the future as a science fiction novel.



Working Number: IT1 087

Name: 'Air force'

Holding Museum: State Library of Modern and Contemporary History

Date: 1911

Materials: -

Curator Justification:	Giuseppe Scalarini worked for the socialist newspaper Avanti! His anticolonial cartoons spoke out against the political interests of the war in Libya and the consequences of war on the population.



Working Number:	RO 008
Name:	Patent for the invention of the fountain pen with a replaceable ink cartridge
Holding Museum:	National Museum of Romanian History
Date:	25 May 1827
Materials:	-
Curator Justification:	Among the inventions of the 19th century, one of the most common objects in the world, the fountain pen with replaceable ink cartridge, was invented by the Romanian mathematician, engineer and pedagogue, Petrache Poenaru. He studied in France and obtained a patent from the French government.



Working Number:	PT 007
Name:	Lisbon Astronomical Observatory
Holding Museum:	-
Date:	1867 (first observations)
Materials:	-
Curator Justification:	Portugal joined the 19th-century trend for regarding technical progress as a sign of development. The Astronomical Observatory responded to the need to study the world with the criteria of scientific knowledge and classification.



Working Number:	ET1 042
Name:	A photo of the Dairy Laboratory at Fu`ad Agricultural Museum
Holding Museum:	Bibliotheca Alexandrina
Date:	16 January 1938 (Photo taken during the inauguration of the museum)
Materials:	-
Curator Justification:	Later in the 20th century, the application of technology to a wide range of sectors, including agriculture, was common. The changes had been so deep that it was felt necessary to document traditional procedures and new technology and hygiene standards. Technical “progress” was still seen as the milestone in the advancement of states.